Based on U.S. claims data, we assigned doctors IDs based on the physician who treated the enrollee for the longest period of time after eliminating any emergency room, laboratory, and radiology services. Physician prescribing patterns were then calculated from prescription drug records. Patients were grouped as generic SSRIs, non-generic SSRIs, and SNRIs. RESULTS: We identified the doctors' prescribing pattern with the percentage of time they prescribed SSRIs, non-generic SSRIs and SNRIs. We showed that patients were more likely to be prescribed generic SSRIs relative to non-generic SSRIs if doctors' prescribing patterns favored generic prescription (p = 0.000). Similarly, patients were less likely to be in the SSRIs group if doctors' prescribing patterns favored SNRI prescription (p = 0.000). CONCLUSIONS: Doctors' prescribing patterns are important factors for decisions on treatment. Any outcomes models (compliance, or treatment effect on health care utilization and cost) should control for these patterns.

PMH92

TIME SERIES ANALYSIS TO EXAMINE THE EFFECT OF GUIDELINES

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OBJECTIVES: Application of a segmented times series model to measure the effect of guidelines on outcomes measures. METHODS: To isolate the effect of guidelines, we need to control for three different factors: 1) Baseline differences between the two groups, 2) Step-wise differences at the intervention point, and 3) Trend differences after the intervention. The segmented times series model was combined with the propensity score matching technique. The segmented time series model contained two predictor variables: the binary intervention variable and an interval coding for time. The kitchen sink approach was used for propensity score matching and the segmented time series model controlled for the confounding influence of any underlying trend. The final model ensured that any estimated change in the mean level of the series after intervention was not simply due to the series' trend. RESULTS: Using U.S. claims data, we analyzed the effect of the American Psychiatric Association's consensus statement on glucose monitoring for patients on atypical antipsychotic drugs. Glucose screening rose 1% per quarter among antipsychotic-treated patients before release of the guidelines, compared to 0.5% per quarter after (P = 0.005 for trend). Monitoring rates were 16.07% before release of the guidelines and 18.76% after (P < 0.001). CONCLUSIONS: The segmented time series model can provide a clear picture about both trend and intervention effect when analyzing the effects of guidelines.

PMH93

AGREEMENT BETWEEN PATIENTS WITH MILD DEMENTIA AND CAREGIVERS ON THE PROMIS CAT MEASURE OF PERCEIVED COGNITIVE FUNCTION

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OBJECTIVES: The PROMIS measure of Perceived Cognitive Function has gone through multiple cycles of development and validation testing, but has not been extensively tested in clinical settings, particularly among patients being treated for neurological conditions and/or cognitive deficits. We sought to do an initial examination of the extent to which patients being treated for mild dementia and their caregivers would agree in their assessment of patient cognitive function using the PROMIS PCF measure. **METHODS**: A total of 14 consecutive patients being seen in the Neurology outpatient clinic at Henry Ford Hospital for a diagnosis of dementia, as well as one adult caregiver per patient, were invited to complete the PROMIS Perceived Cognitive Function CAT measure in reference to the patient's current level of cognitive function. Several analyses of agreement between caregiver and patient reports were conducted. **RESULTS**: All patients and all caregivers were able to successfully complete the PROMIS PCF measure. There was no significant difference between patients and caregivers in either mean raw score, mean T-score, or standard error for the measure. The score ranges for caregivers and patients were quite comparable. The Pearson correlation coefficients for association between patient and caregiver responses were .246 and .286 for raw score and t-score, respectively (both n.s.). **CONCLUSIONS:** The lack of significant difference between patients and caregivers on mean response suggests possible validity of the PCF measure for group-level analyses, but the relatively low correlations between patient and caregiver suggest caution about use of the measure at the individual patient level. The next step of analysis will involve comparison of patient PCF scores to scores on objective measures of cognitive function.

MUSCULAR-SKELETAL DISORDERS – Clinical Outcomes Studies

PMS1

ASSESSMENT OF COMORBIDITIES IN PATIENTS WITH RHEUMATOID ARTHRITIS (RA)—FINDINGS FROM A RETROSPECTIVE CLAIMS DATABASE ANALYSIS USING A PRE-PROGRAMMED DATA ANALYSIS TOOL

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OBJECTIVES: RA is a systemic disease resulting in comorbidities that affect quality of life, prognosis and outcomes. Comorbid illnesses can impact treatment, medical costs, disability and risk of mortality. Rheumatoid Arthritis Outcomes Analyzer, a validated claims data analysis tool with a user-friendly interface was used to characterize comorbidities in patients with RA. **METHODS:** The study included patients age 18 or older with at least 2 diagnoses of RA (ICD-9 CM 714.0X) ≥ 2 months apart between January 2005 and December 2007 from the HealthCore Integrated Research Database[SM]. Patients must have received ≥ one traditional (non-biologic) or biologic DMARD medication with RA diagnoses at least two months apart. All medical and pharmacy claims were entered into the final dataset. **RESULTS:** A total of 25,856 RA patients entered into the analysis (mean age = 56; 74.8% female). The overall mean Charlson Comorbidity Index (CCI) was 2.00 (SD = 1.63) and was higher for males (mean = 2.18; SD = 1.85) than females (mean = 1.94; SD = 1.55). In the 18 to 44 age group, females tended to have a higher CCI (mean = 1.38; SD = 0.91) than males (mean = 1.30; SD = 0.81). This trend reverses in older patients where the mean CCI in males in the 45 to 64 and ≥ 65 age groups is 1.90 (SD = 1.50) and 3.31 (SD = 2.39) respectively versus 1.76 (SD = 1.29) and 2.80 (SD = 2.07) in females. The most frequent comorbid conditions for all patients were; chronic pulmonary disease, diabetes, cerebrovascular disease, tumor, congestive heart failure, peripheral vascular disease and renal disease. **CONCLUSIONS:** This analysis explores and differentiates the CCI by gender and age group in patients with RA using a validated claims data analysis tool. Further study will examine the relationship between comorbidity and health-related and cost outcomes.

PMS2

ESTIMATING HEALTH-RELATED UTILITY FROM CLINICALLY ASSESSED DISEASE SEVERITY IN ANKYLOSING SPONDYLITIS

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OBJECTIVES: We sought to conduct a statistical mapping analysis between a standard investigator assessment of disease severity in ankylosing spondylitis (AS) and domain responses in a standard index of health utility; and secondly, to implement the above mapping in an optimised algorithm to estimate utility. **METHODS:** Multinomial logistic regression was used to estimate response probabilities to each domain of the EQ5D from the Bath Ankylosing Spondylitis Metrology Index (BASMI) among patients enrolled into an RCT studying the use of either etanercept infusion vs. oral sulphasalazine (ASCEND). Other covariates tested were gender, age, co-morbidity, AS duration, DMARD history, and concurrent medications. Predicted EQ5Dindex was estimated by Monte Carlo bootstrap simulation. The predictive ability of the response mapping was assessed by comparing estimated and directly measured utility derived from the UK tariff. **RESULTS:** Evaluable data were available for 566 predominantly white (87%) patients, 74% of whom male, with a mean baseline age of 41 years (sd 12) and median AS duration 4 years (IQR 1 to 11). Average BASMIlinear was 4.1 (sd 1.8) whilst median observed EQ5D utility was 0.587 (IQR 0.193 to 0.691). The linear definition of the BASMI was optimal in an algorithm that also adjusted for gender, AS duration, number of co-morbid body systems, number of historic DMARDs, number of current non-DMARD drugs, and current NSAID use. The mean utility predicted by the optimized algorithm was 0.552 (sd 0.101) and 0.559 (sd 0.295) by estimation directly from EQ5D responses (p = 0.238). The mean squared error between the actual and predicted utilities was 0.076 (sd 0.111). Adjusted utility was defined by −0.044*BASMIlinear+0.715, with an R^2 of 0.62. **CONCLUSIONS:** In this study, response mapping of AS disease activity to the EQ5Dindex produced reliable estimates of preference-based health-related utility. Future analysis will compare the relative ability of patient-reported, AS-specific, functional assessment measures in predicting health-related utility.

PMS3

A BAYESIAN ANALYSIS OF BISPHOSPHONATE EFFICACY FOR THE TREATMENT OF POSTMENOPAUSAL OSTEOPOROSIS

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OBJECTIVES: The aim of this study was to evaluate the effectiveness of five bisphosphonates approved for the treatment of postmenopausal osteoporosis. **METHODS:** Randomized placebo controlled studies describing the occurrence of clinical vertebral (CVF), morphometric vertebral (MVF) and nonvertebral fractures (NVF) were identified by searching the Cochrane Database, International Pharmaceutical Abstracts and Ovid Medline. Studies were eligible if patients had suffered a fracture at entry or had a bone mineral density at least 2 SD below the mean value for young adult females. WinBUGS was used to conduct the analysis, which permitted combining direct and indirect evidence to rank order the treatments. **RESULTS:** A total of 39 studies were identified. All five bisphosphonates were found to reduce the relative risk of new fractures in women with postmenopausal osteoporosis. For CVF, all ORs for treatments compared to placebo were statistically significant, suggesting that treatment with any agent is better than none. Zoledronate was the most effective treatment (OR = 0.22, 95%CRI:0.13–0.36), followed by both alendronate (OR = 0.48, 95%CRI:0.30–0.76) and ibandronate (OR = 0.51, 95%CRI:0.34–0.77) as these could not be differentiated statistically (no data were available for etidronate and risedronate). For MVF also, all ORs for treatments compared to placebo were statistically significant. Zoledronate (OR = 0.28, 95%CRI:0.22–0.35) and etidronate (OR = 0.29, 95%CRI:0.17–0.48) were both most effective, followed by alendronate (OR = 0.52, 95%CRI:0.42–0.64), risedronate (OR = 0.56, 95% 0.45–0.70) and ibandronate (OR = 0.67, 95% 0.54–0.83); The last three could not be differentiated. For NVF the ORs for zoledronate (OR = 0.70, 95%CRI:0.60–0.80), risedronate (OR = 0.71,